

In the claims:

Please amend the claims as follows:

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Claim 1. (Currently Amended) A method for providing a set of travel options comprises:

reducing a larger set of travel options to a smaller set of diverse travel options in accordance with a set of diverse travel requirements that represent conditions for a travel option to be considered for inclusion in the set of diverse travel options.

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Claim 2. (Previously Amended) The method of claim 1 wherein reducing a larger set of travel options to a smaller set of diverse travel options comprises:

generating one or more travel options consistent for each of the diversity of travel requirements.

Claim 3. (Previously Amended) The method of claim 1 wherein reducing a larger set of travel options to a smaller set of diverse travel options comprises:

generating one or more desired travel options consistent with diversity of travel requirements.

Claim 4. (Original) The method of claim 1 wherein reducing a larger set of travel options to a smaller set of diverse travel options further comprises:

generating one or more of the best travel options consistent with a diversity of travel requirements where the travel requirements are dependent on the original set of travel options.

Claim 5. (Original) The method of claim 1 wherein the set of travel requirements includes requirements for different airlines.

Claim 6. (Original) The method of claim 1 wherein the set of travel requirements includes requirements for travel times of day, travel dates, numbers of stops, arrival pr departure airports, and cabin class.

Claim 7. (Original) The method of claim 1 wherein the set of travel requirements includes requirements that are combinations of other requirements.

Claim 8. (Original) The method of claim 7 wherein the set of travel requirement combinations include outbound and return travel dates or times of day.

Claim 9. (Original) The method of claim 7 wherein the set of travel requirements combinations include airlines and number of stops, arrival and departure airports.

Claim 10. (Currently Amended) A method for reducing a larger set of travel options to a smaller set of diverse travel options comprises:

receiving a candidate set of travel options;

generating selecting one or more travel options from the candidate set of travel options that are best for each of a set plurality of travel preference functions; and

combining the selected one or more travel options for each travel preference function to provide a set of diverse travel options.

Claim 11. (Currently Amended) The method of claim 10 wherein the travel preference functions include at least one of functions that optimize cost ~~or~~ and functions that optimize convenience.

Claim 12. (Currently Amended) The method of claim 10 wherein the travel preference functions include ~~both~~ functions that optimize cost, ~~and~~ functions that optimize convenience and functions that optimize combinations of cost and convenience.

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Claim 13. (Currently Amended) A method generating a diverse list of [N] travel options Rts from a larger list of travel options Ts, comprises:

generating a prioritized ordered list of requirements Rs;
sorting the list of travel options Ts by an ordering function F to produce a best-first ordered list Ts2; ~~with the list of options being optimized travel options for a set of travel requirements R in accordance with the ordering function F~~
selecting a travel requirement R1 from the list of requirements Rs;
identifying a travel option T1 in the ordered list Ts2 that satisfies the travel requirement R1;
adding the travel option T1 to the diverse list of travel options Rts;
selecting a second travel requirement R2 from the list of requirements Rs;
identifying a travel option T2 in the ordered list Ts2 that satisfies travel requirement R2; and
adding the travel option T2 to the diverse list of travel options Rts.

Claim 14. (Previously Amended) The method of claim 13 further comprising:
initializing the list of result travel options Rts to be empty; and if the remaining list of requirements Rs is empty,
returning an ordered list of diverse travel options Rts.

Claim 15. (Previously Amended) The method of claim 14 further comprising:
initializing the list of result travel options Rts to be empty; and if the remaining list of requirements Rs is not empty,
selecting a first travel requirement R from the ordered list of requirements (Rs);
and
removing a requirement R from the requirement list (Rs).

Claim 16. (Original) The method of claim 15 further comprising:
finding a first option T in a best-first ordered list (Ts2) that satisfies travel requirements R.

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Claim 17. (Currently Amended) The method of claim 16 further comprising:
~~determine~~ determining whether any option in the Ts2 satisfies the travel
requirement.

Claim 18. (Original) The method of claim 17 wherein if no option in Ts2 satisfies R, the
method further comprises:
checking if the remaining list of requirements Rs is empty.

Claim 19. (Previously Amended) The method of claim 18 wherein if the diversity
process determines if a travel option T is not already in the result list Rts,
adding the travel option T to end of the result travel option list Rts; and
determining if the size of the travel option list Rts is equal to or greater than N the
process in order to return the ordered list of diverse travel options.

Claim 20. (Original) The method of claim 15 further comprising:
determining for each travel requirement R2 and Rs, whether the requirement R2
includes a requirement R, and T satisfies R2, and if T satisfies R2;
removing R2 from Rs.

Claim 21. (Currently Amended) A travel planning system comprising:
a computer system that outputs a set of travel options, smaller than a complete set
of travel options that the ~~server~~ computer has computed, by pruning the ~~larger~~ complete
set of travel options to a smaller set with a diversity-based pruning process, wherein the
diversity-based pruning process produces at least one travel option in the smaller set that
satisfies a first travel requirement and at least one other travel option in the smaller set
that satisfies a second travel requirement that is different from the first travel
requirement.

Claim 22. (Currently Amended) The travel planning system of claim 21 wherein the diversity-based pruning process comprises instructions to cause the system to:

- generate a diverse list of N travel options Rts from a larger list of travel options Ts,
- generate a prioritized ordered list of requirements Rs, and
- sort the list of travel options Ts by an ordering function F to produce a best-first ordered list Ts2 with the list of options being optimized travel options for a set of travel requirements R in accordance with the ordering function F.

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Claim 23. (Currently Amended) The travel planning system of claim ~~23~~ 22 further comprising instructions to cause the system to:

- initialize the list of result travel options Rts to be empty; and if the remaining list of requirements Rs is empty,
- return an ordered list of diverse travel options Rts.

Claim 24. (Currently Amended) The travel planning system of claim ~~24~~ 23 further comprising instructions to cause the system to:

- initialize the list of result travel options Rts to be empty; and if the remaining list of requirements Rs is not empty,
- select a first travel requirement R from the ordered list of requirements (Rs); and
- remove a requirement R from the requirement list (Rs).

Claim 25. (Previously Added) The method of claim 1 wherein reducing a larger set of travel options to a smaller set of diverse travel options further comprises: evaluating for the travel requirements a set of travel preference functions used to order the larger set of travel options.

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Claim 26. (New) A method executed in a computer system to output a set of travel options, the method comprising:

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reducing a larger set of travel options to a smaller set of diverse travel options in accordance with diverse travel requirements that represent conditions for a travel option to be considered for inclusion in the smaller set of diverse travel options, wherein for each of the diverse travel requirements, at least one travel option in the set of diverse travel options represents a best travel option from the larger set of travel options for that specific travel requirement.

Claim 27. (New) The method of claim 26 wherein each of the travel options comprise an itinerary and a price.
